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UNITED STATES DEPARTMENT OF AGRICULTURE  
Agricultural Research Administration  
Bureau of Entomology and Plant Quarantine  
Washington 25, D. C.

February 15, 1946

Results of the trap-scouting performed during the summer of 1945 to secure information on the distribution and possible status of the Japanese beetle in localities outside the area regulated by Federal quarantine are summarized in the attached statement. This includes a list of all localities outside the regulated area where trap-scouting was carried on with positive results during the seasons 1936 to 1945, inclusive, with the respective catches, together with a list of localities where soil treatments have been applied at isolated infestations from 1943 to date.

Acreages to which soil treatments were applied in 1945 were much reduced from those of the past few years, coinciding with a general reduction in beetle population due to unfavorable conditions for grub survival in 1944. Soil treatments completed, plus additional acreages to be completed in two Virginia communities in the spring of 1946, total 555.25 acres. These treatments were carried out with the cooperation of the interested States and municipalities. They are attempts to eradicate outlying incipient infestations or, if eradication is impracticable, to suppress the infestations so that they do not become new centers of spread. This type of treatment involves the application of lead arsenate at a dosage of 500 pounds per acre. Treatment is recommended within a radius of 300 feet of all collections of female beetles or multiple finds of either sex. Usually treatment is not applied in sections where solitary male beetles are captured, such areas being reserved for trapping the following season more accurately to determine the conditions of infestation. Extensive experimental soil treatments with DDT were also undertaken at Blowing Rock, N. C.

Suppressive measures already applied or assured for the spring of 1946 in localities outside the regulated area, together with State quarantine action in certain outlying areas, will, in most instances, assure protection from spread at least comparable with that afforded if the Federal quarantine were extended. Immediate additions to the area regulated under the Federal Japanese beetle quarantine as a result of the season's trapping and survey records, therefore, will probably be limited to a single election district in Allegany County, Md.; the township of Madison, Licking County, and township of Marion, Franklin County, Ohio; and the town of Shenandoah, Va.

The necessity of holding a hearing or conference to consider the extension of the regulated area or modification of the regulations, prior to a revision of the quarantine regulations, can be avoided. It is expected that a revision of the regulations will be issued in the near future.

The accompanying report is similar to any report on current conditions that might be presented at a public conference. It is issued to make available to State plant quarantine officials and other interested parties the latest information on the distribution and status of the Japanese beetle in areas not now included under Federal quarantine and to acquaint them with the proposed revision of the regulations.

P. N. Annand  
Chief of Bureau

Attachments - 3



REPORT OF RESULTS OF JAPANESE BEETLE TRAPPING  
AND CONTROL OPERATIONS DURING 1945

More widespread than in any previous year, the 1945 Japanese beetle trapping program extended to 698 localities in 35 States. Total traps used during the year was 56,377, some 10,000 fewer than the previous year. However, the coverage was a considerable increase over the 462 localities trapped in 1944. Beetles were caught in 96 cities and towns. Of these, 35 were first-record collections. At 56 localities the number of beetles collected were few, and the conditions are of such a nature that there is no hazard of spread through movement of products into other sections. No action in reference to these localities is contemplated at this time. At the remaining 40 localities control or regulatory action is needed. At 33 of the 40 localities soil treatment has already been applied. The remaining 7 will be either under state quarantine or federal quarantine, or the soil treatment will be applied in the spring of 1946.

Lack of rainfall in the summer of 1944 resulted in a rather general reduction in beetles caught during 1945 at isolated infestations where combination trapping-soil treating programs have been depended upon to keep the beetle in check. This same condition existed in the continuously infested area, where a marked drop in beetle populations occurred, except in a few places where 1944 precipitation was near normal.

Cooperation of officials of the Army, Navy and many municipalities was enlisted in a nation-wide precautionary airport trapping program. This embraced all airports outside the infested area considered of major importance as possible destinations for accidental carriage of adult beetles by plane. This airport scouting extended to 107 airports in 28 States. Batteries of 24 traps each were set up along boundaries of the airfields for approximately six weeks' operation.

Solitary beetles each were caught in traps set at the New Orleans, La. airport; Hunter Field airport, Savannah, Ga.; and the Huntington, W. Va. airport at Chesapeake, Ohio. Two beetles each were recovered at the Charlotte, N. C. and Memphis, Tenn. airports, while three beetles were trapped at the Charlestown, S. C. municipal airport. Evidence in each case indicated that these specimens were hitch-hiking beetles transported to new environments by airplane movement.

State-Federal cooperative soil treatments of important isolated infestations were continued by the States of Georgia, Illinois, Indiana, Michigan, Missouri, New York, North Carolina, Ohio, and Virginia. These again involved the application of lead arsenate at the rate of 500 pounds per acre within a radius of approximately 300 feet of significant beetle finds. A few of the infestations were of such an extent that soil treating was not considered practicable. Quarantine action is contemplated in these instances.

Soil treatments were completed in July at Atlanta and Dahlonega, Georgia, to control infestations of 13 and 37 beetles, respectively. Acreages involved were 4.6 in Atlanta and 2.7 at the Dahlonega first-record. The only other captures in the State were limited to solitary beetles each at Augusta, Austell, Toccoa and the Army Air Base at Hunter Field, Savannah.

Contrasted with the 708 beetles trapped in Chicago in 1944, this year's capture of 164 showed an improved situation there. Cooperative soil treatments this year covered 62.45 acres. The only other beetles captured in Illinois were 5 at Highland Park and one at East St. Louis.

Fewer beetles were trapped in Indianapolis, Ind. than in any year since the first beetles were caught there in 1934. The season's collection was limited to 3 specimens. Another beetle was captured at Whiting, Ind. At Elkhart, where 21 beetles were caught, 19.2 acres received soil treatment.

A solitary beetle trapped in a residential section of Kansas City, Kansas constitutes a first-record for that State.

Traps set in a number of communities outside the Maryland regulated area, in conjunction with the State-Federal control program, turned up a sizeable first-record infestation in Oldtown, Allegany County, as well as smaller recurring infestations in Bloomington, Mechanicsville and Oakland.

With the exception of the infestations of 6 beetles at Ecorse and a solitary beetle at Melvindale, all infestations found in Michigan this year have received soil treatments. Areas treated in Detroit (24 beetles), Grand Rapids (166), Kalamazoo (63), Muskegon (7), and River Rouge (278), were 25.05, 80, 29.9, 10.1, and 32.05 acres, respectively.

At St. Louis, Mo., the infestation was again at a minimum, with only 7 beetles caught. The section of 7.7 acres involved received soil treatment.

Minor infestations of a few beetles each were found at Batavia, Falconer, Gardenville, Jamestown, Mexico, Phoenix, Plattsburg, Silver Creek and Westfield, in New York. Soil treatments were applied to 8.3 acres where 7 beetles were trapped at Jamestown. Likewise, soil treatments of 7 acres and 25.65 acres, respectively, were made at Fairport, a first-record infestation of 54 beetles, and Geneva, where 94 beetles were collected. In addition, 21.5 acres were treated in Niagara Falls on the basis of the 1944 trapping there. Forty-six beetles were trapped in Waterloo, but 32 of these were collected in blocks where soil treatments were applied in the spring and fall of 1943. Further treating is under consideration in this locality.

Of the 20 North Carolina cities and towns in which beetles were trapped this year, six received prompt soil treatment for control. Localities treated, with beetles caught and acreages covered, were as follows: Durham, 47 beetles - 13.2 acres; Rocky Mount, 5 - 2.4; Salisbury, 29 - 13; Spencer, 41 - 6.9; Wilson, 8 - 2.7; and Winston-Salem, 7 - 6.4. Twelve of the remaining infestations were from 1 to 6 beetles each. East Spencer, with 32 beetles, was the only important infestation that did not receive soil treatment. This locality is already in the State quarantined area. At the Blowing Rock established infestation, 250 acres were experimentally treated with the new insecticide DDT. Traps operated during the summer in this State quarantined area caught 42,271 beetles, about one-third of the previous year's catch.

Ohio did a complete soil treating job of all infestations determined outside the regulated area of the State, except at four localities showing solitary beetles only; at Belpre, where the 32 beetles trapped were in the confines of the already treated area; and at two established infestations found by nursery scouts adjacent to the Columbus and Newark isolated regulated areas. Addition of these latter two townships to the regulated areas is anticipated. A total of 132.55 acres received soil treatments in Bellevue, Cresline, Elyria, Gallipolis, Geneva, Lorain, Loudonville, New Concord, Painesville and adjacent Lake County area, and Willard.

A solitary beetle at Columbia, 25 beetles at Greenville, and the already mentioned three beetles at Charleston municipal airport comprise the South Carolina catches this year. The State purchased lead arsenate with which to treat 15 acres at the Greenville infestation, but has been prevented from applying it because of labor difficulties. Due to the erratic behavior of the Greenville infestation from year to year, soil treatment may be held in abeyance pending a trap resurvey there in 1946.

A stray beetle trapped in Barre, Vt. was the only positive result of trapping in that State.

Most important of the 15 infestations determined in Virginia this year was that at Shenandoah, where 1,656 beetles were trapped for a first-record in this locality. Soil treatments are not contemplated here, and it is under consideration for quarantine extension. Soil treatments were completed at Alta Vista and Wytheville, first-record infestations of 9 and 4 beetles each, with respective applications to 7.7 and 4.2 acres. Treatment of 12 acres at Clifton Forge (16 beetles) and 18 acres at Covington (83 beetles) is assured in the spring of 1946. In addition, minor infestations in which trap-control will be continued were found at Ashland, Bedford, Bridgewater, Dayton, Galax, Harrisonburg, Hopewell, Midlothian, Lynchburg, and Rocky Mount.

Trap collections in West Virginia were limited to 3 beetles at Gassaway, an initial report, and 5 beetles in Huntington. Neither locality requires soil treatment at this time.

JAPANESE BEETLE TRAPPING  
OUTSIDE PRESENT REGULATED AREA  
1936 - 1945

POSITIVE RESULTS

LOCATION	1945	1944	1943	1942	1941	1940	1939	1938	1937	1936
	Traps J. B.									
<b>FLORIDA</b>										
Jacksonville	875	0	625	5	12	0	295	1	600	0
Miami	24	0	600	0	16	0	300	1	300	0
Tampa	24	0	600	0	-	300	0	600	1	600
<b>GEORGIA</b>										
Atlanta	700	13	1000	17	1000	8	1025	4	2369	24
Augusta	297	1	300	9	292	11	300	5	-	3109
Austell	20	-	-	0	25	0	25	0	50	32
Chamblee	-	-	25	0	-	0	-	64	17	400
Dekalbaga	15	37	-	0	25	0	-	-	-	-
East Point	100	0	100	3	100	5	100	4	350	7
Gainesville	51	0	-	-	-	-	100	1	200	137
Jonesboro	-	-	-	-	-	-	-	83	0	400
Savannah	-	-	300	0	-	297	0	-	12	0
Savannah Airport (Hunter Field)	24	-	-	-	-	-	-	298	0	12
Toccoa	100	1	92	17	100	21	50	3	100	0
<b>ILLINOIS</b>										
Bloomington	-	-	50	0	-	-	-	-	-	-
Chicago	9450	164	9500	708	5738	257	7550	170	9200	407
Cicero	-	-	250	3	300	1	-	400	0	10000
East St. Louis	275	1	300	2	300	16	599	1	600	10
Elgin	-	-	50	0	-	-	-	300	0	600
Evanston	400	0	-	-	-	-	400	0	800	0
Highland Park	700	5	500	10	400	63	600	173	1100	5608
Highwood	-	-	-	-	100	0	200	1	-	-
Oak Park	-	-	250	0	300	1	-	300	0	300
<b>INDIANA</b>										
Bedford	-	-	50	0	-	-	99	0	240	1
Bluffton	-	-	-	-	-	-	-	-	250	-
East Chicago	300	0	-	-	-	-	-	-	300	300
Elkhart	300	21	390	35	415	9	289	6	399	77
Fort Wayne	-	-	615	86	555	8	596	4	1236	299
Hammond	134	0	293	54	232	24	400	8	324	1200
Indianapolis	763	3	1000	20	965	32	1195	7	2514	21
Logansport	50	0	300	7	300	7	300	9	317	5
Luncie	-	-	50	1	-	-	-	-	313	13
Newcastle	300	0	-	-	-	-	200	0	200	400
Richmond	-	-	300	4	300	17	298	556	427	400
South Bend	599	0	-	-	-	-	400	1	1126	1200
Terre Haute	-	-	300	0	-	-	400	1	1600	1600
Warsaw	200	0	-	-	-	-	100	0	195	60
Waiting	157	1	-	-	100	0	400	0	300	194
<b>IOWA</b>										
Pt. Madison	-	-	-	-	-	-	-	-	200	0
<b>KANSAS</b>										
Kansas City	137	1	-	-	-	-	-	-	-	780
<b>KENTUCKY</b>										
Lexington	200	0	-	-	-	274	0	1223	1	1200
Louisville	572	0	-	-	-	590	1	-	4	1600
<b>LOUISIANA</b>										
New Orleans Airport	24	1	-	-	-	-	-	-	-	-
<b>MAINE</b>										
Bangor	-	-	-	-	-	-	-	325	9	400
Bar Harbor	-	-	-	-	-	-	-	95	4	5
Bath	-	-	-	-	-	-	-	-	150	100
Brunswick	-	-	-	-	-	-	-	-	175	200
Ellsworth	-	-	-	-	-	-	-	115	0	100
<b>MARYLAND</b>										
Bloomington	10	15	10	11	-	-	-	-	-	-
Chaptico	-	-	-	-	-	-	-	-	-	-
Leonardtown	-	-	109	0	85	1	151	0	150	192
Mechanicsville	40	8	44	4	41	7	68	5	-	50
Oakland	30	1	30	2	30	7	-	-	25	10
Oldtown	40	3667	-	-	-	-	-	-	-	125
<b>WICHIGAN</b>										
Birmingham	-	-	200	0	200	0	161	5	200	6
Dearborn	200	0	300	2	300	2	366	1	400	780
Detroit	4100	24	4000	95	3580	86	5056	32	7000	225
Ecorse	200	6	-	-	-	-	-	80	-	200
Flint	700	0	700	11	704	37	197	-	-	-
Grand Rapids	278	166	-	-	-	-	-	100	0	200
Grosse Point Farms	-	-	-	-	-	-	-	0	25	400
Highland Park	-	-	-	-	-	-	-	0	5	200
Kalamazoo	112	63	-	-	100	0	89	2	-	0
Lincoln Park	-	-	-	-	-	-	-	100	1	200
Midvale	100	1	100	0	100	1	100	2	100	5
Muskegon	110	7	-	-	-	-	-	-	-	-
Pontiac	200	0	-	-	-	-	179	0	-	200
River Rouge	300	278	200	42	200	24	100	1	-	0
<b>MISSOURI</b>										
Bridgeton (St. Louis-Lambert Field)	15	0	20	0	19	0	77	1	108	3
Kansas City	473	0	10	1	12	0	12	0	12299	30
St. Louis	3516	7	4792	4	2379	14	7921	6	10168	26
										11562
										88

\* First record

JAPANESE BEETLE TRAPPING  
1936 - 1945

\* First Record

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1936 - 1945

• First record

JAPANESE BEETLE TRAPPING

1936 - 1945

LOCATION	1945	1944	1943	1942	1941	1940	1939	1938	1937	1936
	Traps J. B.									
<b>WEST VIRGINIA</b>										
Beckley	-	-	-	100	10	-	-	-	-	-
Bluefield	-	-	-	100	9	-	-	-	-	-
Elkins	-	-	-	-	99	3	-	-	-	-
Gassaway	20	3	-	-	-	-	-	-	125	0
Huntington	298	5	-	200	4	-	-	-	0	285
Pennsboro	-	-	-	-	-	-	-	-	-	0
Princeton	-	-	-	100	21	100	11	-	-	-
St. Albans	40	0	100	0	-	23	1	-	-	-
St. Marys	-	-	-	100	8	-	30	0	40	-
Williamstown	-	-	-	100	19	-	-	-	30	0
									12	0

\* First record

## COOPERATIVE STATE-FEDERAL SOIL TREATMENTS FOR JAPANESE BEETLE CONTROL

## AT ISOLATED INFESTATIONS

1943 - 1946

State and City	Japanese Beetles	Soil Treatments	Japanese Beetles	Soil Treatments	Japanese Beetles	Soil Treatments
	Trapped 1943 (Number)	Fall 1943 and Spring 1944 (Acres)	Trapped 1944 (Number)	Fall 1944 and Spring 1945 (Acres)	Trapped 1945 (Number)	Fall 1945 or Proposed for Spring 1946 (Acres)
<b>FLORIDA</b>						
Jacksonville	0	-	5	7.5	0	-
<b>GEORGIA</b>						
Atlanta	8	2.5	17	1.35	13	4.6
Augusta	11	1.5	9	-	1	-
#Dahlonega	-	-	-	-	37	2.7
Toccoa	21	1.5	17	1.35	1	-
<b>ILLINOIS</b>						
Chicago	257	139.3	708	223.25	164	62.45
East St. Louis	16	9.5	2	-	1	-
Highland Park	63	28.2	10	-	5	-
<b>INDIANA</b>						
Elkhart	9	-	35	37.6	21	19.2
Fort Wayne	8	-	96	71.55	-	-
Hammond	24	32.6	54	56.15	0	-
Indianapolis	32	14.57	20	23.4	3	-
Logansport	7	-	7	4.3	0	-
Richmond	17	20.35	4	-	-	-
<b>MICHIGAN</b>						
Birmingham	0	-	0	-	-	-
Dearborn	2	-	2	-	0	-
Detroit	86	90.0	95	48.3	24	25.05
Flint	37	57.7	11	8.3	0	-
#Grand Rapids	-	-	-	-	166	80.0
#Kalamazoo	-	-	-	-	63	29.9
Lincoln Park	0	-	-	-	-	-
Melvindale	1	-	0	-	1	-
#Muskegon	-	-	-	-	-	-
River Rouge	24	20.8	42	32.6	278	32.05
<b>MISSOURI</b>						
#Kansas City (Airport)	-	-	1	1.58	-	-
St. Louis	14	13.0	4	1.91	7	7.7
<b>NEW YORK</b>						
Avon	37	-	0	-	54	7.0
#Fairport	-	-	-	-	10	-
#Falconer	-	-	-	-	94	25.65
Geneva	37	23.1	197	44.0	7	8.3
Jamestown	154	5.7	31	-	-	-
Newark	1	-	7	11.33	-	-
Niagara Falls	71	16.0	20	-	-	-
North Tonawanda	7	-	22	-	-	-
Ogdensburg	315	6.0	-	-	-	-
#Phoenix	-	-	-	-	-	-
Plattsburg	5	-	-	-	-	-
Silver Creek	60	6.8	0	-	-	-
Waterloo	171	7.0	18	-	46	-
Westfield	27	8.3	2	-	2	-
Williamson	0	-	31	10.5	-	-
<b>NORTH CAROLINA</b>						
Blowing Rock	17405	25.0	138945	-	42271	DDT
Burgaw	-	-	22	8.8	5	-
Charlotte	5	-	222	35.3	3	-
Dunn	2	-	-	-	47	13.2
Durham	2	-	-	-	-	-
Elizabeth City	38	6.1	72	3.7	-	-
Gastonia	52	9.3	60	15.4	-	-
Greensboro	19	6.0	8	-	-	-
Hendersonville	782	75.6	20000	-	-	-
High Point	9	-	26	10.6	-	-
Lenoir	-	-	4	3.0	-	-
Lexington	-	-	2	1.2	-	-
Raleigh	13	-	35	8.1	-	-
Reidsville	18	5.2	2	-	-	-
Rocky Mount	14	2.9	-	-	-	-
Salisbury	58	8.8	88	9.3	28	2.4
Spencer	4	-	62	6.0	41	13.0
Spruce Pine	-	-	6	2.3	-	6.9
Warsaw	-	-	10	4.3	-	-
Weldon	0	-	13	-	0	-
West Jefferson	-	-	-	-	0	-
Wilmington	38	3.2	3	-	08	2.7
Wilson	12	-	-	-	7	6.4
Winston-Salem	4	-	-	-	-	-
<b>OHIO</b>						
Ashland	-	-	23	21.7	1	-
Ashtabula	169	42.8	203	-	84	28.5
Bellevue	135	10.4	58	32.7	* 32	-
Belpre	72	5.1	0	-	0	-
Caldwell	1	3.3	-	-	-	-
Chillicothe	0	-	-	-	-	-
Cincinnati (Lunken Airport)	34	10.0	50	10.2	-	-
Conneaut	24	16.3	27	52.7	11	7.7
Crestline	19	1.9	2	-	8	20.4
East Conneaut	-	-	7	14.0	-	-
Elyria	2	2.3	1	-	-	-
Fostoria	1	1.08	-	-	-	-
Fowlers Mills	329	3.3	12	23.18	40	8.7
Gallipolis	-	-	8	5.8	54	7.9
Geneva	1	4.6	0	-	-	-
Lima	7	10.5	9	17.5	-	2.1
Lorain	-	-	-	-	-	3.15
#Loudonville	434	28.8	289	-	-	-
Marietta	-	36.8	17	34.1	0	-
Marion	50	-	-	-	0	-
Mt. Vernon	0	-	-	-	0	-
Nelsonville	-	-	0	-	0	-
New Concord	19	27.6	30	18.0	26	11.1
Painesville (Lake County)	-	-	1	12.7	11	12.0
Rockbridge	24	-	4	-	4	14.4
South Zanesville	29	10.9	1	4.35	0	16.6
Van Wert	-	-	3	12.63	0	-
Willard	4	6.5	1	-	0	-
Zanesville	-	-	-	-	-	-

\* All beetles caught in previously treated area. No soil treating required.

\*\* Captures consisted of isolated, single beetles only. No soil treating required.

† First Record

DDT-250 acres were treated with DDT on an experimental basis at Blowing Rock, N. C.

(T) Soil treating planned for Spring 1946; all other soil treatments listed have been completed.

## COOPERATIVE STATE-FEDERAL SOIL TREATMENTS FOR JAPANESE BEETLE CONTROL

## AT ISOLATED INFESTATIONS

1943 - 1946

State and City	Japanese Beetles Trapped 1943 (Number)	Soil Treatments Fall 1943 and Spring 1944 (Acres)	Japanese Beetles Trapped 1944 (Number)	Soil Treatments Fall 1944 and Spring 1945 (Acres)	Japanese Beetles Trapped 1945 (Number)	Soil Treatments Fall 1945 or Proposed for Spring 1946 (Acres)
<u>SOUTH CAROLINA</u>						
Florence	76	-	**2	-	-	-
Greenville	20	-	47	-	25	-
<u>TENNESSEE</u>						
Bristol	5	1.15	**1	-	-	-
Kingsport	-	6.85	0	-	-	-
Mountain City	-	-	6	1.75	-	-
<u>VIRGINIA</u>						
Alta Vista	-	-	-	-	9	7.7
Bristol	24	2.0	**2	-	-	-
Clifton Forge	-	-	-	-	16	12.0 (T)
#Covington	-	-	-	-	83	18.0 (T)
Dayton	-	-	-	-	4	-
Harrisonburg	22	-	* 11	-	2	-
Lexington	23	4.7	0	-	-	-
Luray	3	-	00	-	-	-
Lynchburg	25	-	5	-	15	-
Waynesboro	10	6.3	0	-	-	-
Woodstock	19	8.7	0	-	4	-
#Wytheville	-	-	-	-	-	4.2

\* All Beetles caught in previously treated area. No soil treating required.

\*\* Captures consisted of isolated, single beetles only. No soil treating required.

# First Record

DDT-250 acres were treated with DDT on an experimental basis at Blowing Rock, N. C.

(T) Soil treating planned for Spring 1946; all other soil treatments listed have been completed.

## STATE SUMMARY OF SOIL TREATMENTS

State	Fall 1943 and Spring 1944	Fall 1944 and Spring 1945	Fall 1945 or Planned for Spring 1946
Florida	5.5	7.5	7.3
Georgia	177.0	225.25	62.45
Illinois	67.52	195.0	19.2
Indiana	148.5	89.2	177.1
Michigan	13.0	3.49	7.7
Missouri	72.9	65.83	62.45
New York	145.0	108.0	44.6
North Carolina	233.3	290.68	132.55
Ohio	-	-	-
South Carolina	8.0	1.75	41.9
Tennessee	21.7	-	-
Virginia	-	-	-
	890.42	985.40	555.25